FILING BY "EXPRESS MAIL" UNDER 37 CFR 1.10											
EL751039804US	July 5, 2001										
Express Mail Label Number	Date of Deposit										

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF BUEHLER ET AL. APPLICATION NO:

FILED:

FOR: pCAR AND ITS USES

Assistant Commissioner for Patents Washington, D.C. 20231

SUBMISSION OF SEQUENCE LISTING INCLUDING STATEMENT OF VERIFICATION

Sir:

In accordance with 37 CFR §1.821(f), it is hereby certified that the appended computer readable form of the Sequence Listing (§1.821(e)) is identical to the paper copy of the Sequence Listing that is part of the specification (§1.821(c)).

Respectfully submitted,

Novartis Corporation Patent and Trademark Dept. 564 Morris Avenue Summit, NJ 07901-1027 (908) 522-6938

Date: July 5, 2001

Susan Hess Attorney for App

Attorney for Applicants Reg. No. 37,350

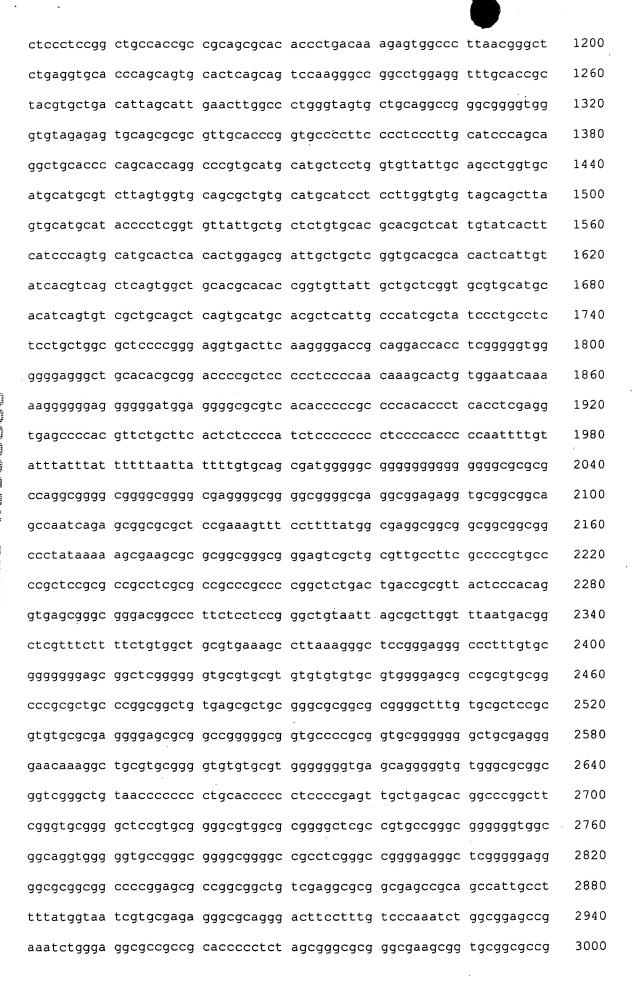
SEQUENCE LISTING

<110> Thomas Buehler, Reto Andreas Gadient, Reinhard Korn, Rao Movva pCAR and its uses <130> 4-31499A <160> <170> PatentIn version 3.0 <210> 1 <211> 4286 <212> DNA <213> Artificial/Unknown <220> <221> CDS

<222> (3229)..(4014)

<223> delta pCAR gene

<400> 1 cqqtqcqgqc ctcttcqcta ttacqccaqc tqqcqaaagq qqqatqtqct qcaaqqcqat 60 taagttgggt aacgccaggg ttttcccagt cacgacgttg taaaacgacg gccagtgcca 120 agttgggate tttgeattgg eccaeggete teaggatggg gatgeteece tteageacee 180 ggttcccctt ggaaactgat ggtcctggct ctgtggcatg gcagtggcac tgtgaggagc 240 ccctaccage ageacacagt gggtttggea etgecacget eeggatgeeg egetetgate 300 caaccccata atcaagggaa cccgaattgc cccatcattg cccccaccac ccccatcctg 360 ccgggccctc acaccccacg ctgccttgtg gtgacattcc ccagcccaaa cccacggctt 420 catggctacc geggggcatt teccattgee geeceattat cagetetgea caceteeege 480 540 tgtacccatg cctcgtggct gcccttcttt gacgtataat cttctaatta atacccggcc 600 ttgtcaaagt ggagcacaaa cgttaattaa ttccccagca ggcaggtaat taacagtgtg actccctttt tgctgcgagt ggggctgata cagagagatg tggcactatg gagcccacgg 660 ggtcctggca ctgggtgccc acggaggtcc ccatgtgctg cagtgtcacc gcctccgagg 720 tgacagtatt gtccctgcgg tgtccctgca gctcagctct gtccacaggg ccacctccag 780 tttggagggg acacaatgca gccccgatgc aacccatcct cgcagcatcc cagggacaaa 840 gaccccactg caagaccgca cacagggctg ggtcccgctc ccctaatatc tacagtgctt 900 960 ttgcatggcc ccttaatcaa tgcagttaat cagcatgcgc tcatgcaccg ctctggagct 1020 gcaaagcccc tcgcagcgct gctcaccaac accgcgcacc gccccggccc agcctgcagc acgcgctgca aacaggaaag aaacaaaata ttgcccaaat gtaggcaaag gcattcggct 1080 1140 gccttgacct ccgccgggcc gggccctgcc tgactcagct ccttactcag cgctcgcttc





gcag	gaag	ga a	atgg	gcgg	ıg ga	gggc	cttc	gtç	cgtc	gcc	gcgc	cgcc	gt c	ccct	tctcc	3060
atct	ccag	cc t	cggg	gctg	ic că	cagg	ggga	cgg	gctgc	ctt	cggg	ıgggg	jac ç	ggggc	agggc	3120
gggg	ıttcg	gc t	tctg	ıgcgt	g tg	accg	gcgg	ggt	ttat	atc	ttcc	cttc	tc t	gttc	ctccg	3180
cago	cccc	aa g	ıctta	ıaggt	g ca	ıcggc	ccac	gtç	ggga	icta	gtgc	cacc			ctc Leu	3237
														aga Arg		3285
														ggg Gly		3333
														cag Gln 50		3381
														aag Lys		3429
_									_				-	gac Asp		3477
														ctc Leu		3525
														gat Asp		3573
														aat Asn 130	_	3621
														tgt Cys		3669
														ţgt Cys		3717
														ttg Leu		3765
														tca Ser		3813
														tac Tyr		3861

200 205 210

200														
tgt acc gtg aaa aac aga gtg ggc tct gat cag tgc ctg ctt cgc ctg Cys Thr Val Lys Asn Arg Val Gly Ser Asp Gln Cys Leu Leu Arg Leu 215 220 225	3909													
gat gtg gtt cct cct tca aat aga gct gga aca att gca gga gct gtt Asp Val Val Pro Pro Ser Asn Arg Ala Gly Thr Ile Ala Gly Ala Val 230 235 240	3957													
ata gga gtt ttg ctt gct cta gtg ctc att ggt ctt atc atc ttt tgc Ile Gly Val Leu Leu Ala Leu Val Leu Ile Gly Leu Ile Ile Phe Cys 245 250 255	4005													
tgt cgt taa tctagataag taatgatcat aatcagccat atcacatctg Cys Arg 260														
tagaggtttt acttgcttta aaaaacctcc cacacctccc cctgaacctg aaacataaaa														
tgaatgcaat tgttgttgtt aacttgttta ttgcagctta taatggttac aaataaagca														
atagcatcac aaatttcaca aataaagcat ttttttcact gcattctagt tgtggtttgt														
ccaaactcat caatgtatct tatcatgtct ggatccccgg gtaccgagct cg	4286													
<210> 2 <211> 261 <212> PRT <213> Artificial/Unknown														
Met Ala Leu Leu Cys Phe Val Leu Leu Cys Gly Val Ala Asp Leu 1 5 10 15														
Thr Arg Ser Leu Ser Ile Thr Thr Pro Glu Gln Met Ile Glu Lys Ala 20 25 30														
Lys Gly Glu Thr Ala Tyr Leu Pro Cys Arg Phe Thr Leu Gly Pro Glu 35 40 45														
Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Leu Ser Pro Ala Asp Asn 50 . 55 60														
Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser Gly Asp Lys Ile Tyr 65 70 75 80														
Asp Asp Tyr Tyr Gln Asp Leu Lys Gly Arg Val His Phe Thr Ser Asn 85 90 95														
Asp Leu Lys Ser Gly Asp Ala Ser Ile Asn Val Thr Asn Leu Gln Leu 100 105 110														



Ser Asp Ile Gly Thr Tyr Gln Cys Lys Val Lys Lys Ala Pro Gly Val 115 120 125

Gly Asn Lys Lys Ile Gln Leu Thr Val Leu Leu Lys Pro Ser Gly Thr 130 135 140

Arg Cys Tyr Val Asp Gly Ser Glu Glu Ile Gly Asn Asp Phe Lys Leu 145 150 155 160

Lys Cys Glu Pro Lys Glu Gly Ser Leu Pro Leu Leu Tyr Glu Trp Gln 165 170 175

Lys Leu Ser Asn Ser Gln Lys Leu Pro Thr Leu Trp Leu Ala Glu Met 180 185 190

Thr Ser Pro Val Ile Ser Val Lys Asn Ala Ser Thr Glu Tyr Ser Gly
195 200 205

Thr Tyr Ser Cys Thr Val Lys Asn Arg Val Gly Ser Asp Gln Cys Leu 210 215 220

Leu Arg Leu Asp Val Val Pro Pro Ser Asn Arg Ala Gly Thr Ile Ala 225 230 235 240

Gly Ala Val Ile Gly Val Leu Leu Ala Leu Val Leu Ile Gly Leu Ile 245 250 255

Ile Phe Cys Cys Arg 260

<210> 3

<211> 1098

<212> DNA

<213> Artificial/Unknown

<220>

<221> CDS

<222> (1)..(1098)

<223> full length porcine CAR

<400> 3

atg gcg ctc ctg tgc ttc gtg ctc ctg tgc gga gtc gcg gat ctc
Met Ala Leu Leu Cys Phe Val Leu Cys Gly Val Ala Asp Leu
1 5 10 15

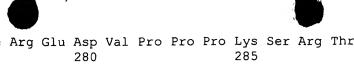
acc aga agt ttg agt atc act act cct gaa cag atg att gaa aag gcc
Thr Arg Ser Leu Ser Ile Thr Thr Pro Glu Gln Met Ile Glu Lys Ala
20 25 30

48

96



					tat Tyr											144
					gac Asp											192
					gtg Val 70											240
					gat Asp											288
					gat Asp											336
					tat Tyr											384
					cag Gln											432
					gga Gly 150											480
					gaa Glu											528
					cag Gln											576
					tct Ser											624
					gtg Val											672
					gtt Val 230											720
					gtt Val											768
		_	_		aaa Lys	_	-	_	Glu	-				Lys		816
gtg	cat	cat	gat	atc	agg	gaa	gac	gtg	cct	cct	ccg	aag	agc	aga	acg	864



Val	His	His 275	Asp	Ile	Arg	Glu	Asp 280	Val	Pro	Pro	Pro	Lys 285	Ser	Arg	Thr	
														gga Gly		912
														aac Asn		960
														ctc Leu 335		1008
														gtg Val		1056
	_			_	_	_	_	_	ggg Gly			_	taa			1098
-016																

<210> <211> 365 <212> PRT <213> Artificial/Unknown

<400> 4

Met Ala Leu Leu Cys Phe Val Leu Cys Gly Val Ala Asp Leu

Thr Arg Ser Leu Ser Ile Thr Thr Pro Glu Gln Met Ile Glu Lys Ala 20 25

Lys Gly Glu Thr Ala Tyr Leu Pro Cys Arg Phe Thr Leu Gly Pro Glu 40

Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Leu Ser Pro Ala Asp Asn 50

Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser Gly Asp Lys Ile Tyr 65 70

Asp Asp Tyr Tyr Gln Asp Leu Lys Gly Arg Val His Phe Thr Ser Asn 85 90

Asp Leu Lys Ser Gly Asp Ala Ser Ile Asn Val Thr Asn Leu Gln Leu

Ser Asp Ile Gly Thr Tyr Gln Cys Lys Val Lys Lys Ala Pro Gly Val 115 120



Gly Asn Lys Lys Ile Gln Leu Thr Val Leu Leu Lys Pro Ser Gly Thr 130 135 140

Arg Cys Tyr Val Asp Gly Ser Glu Glu Ile Gly Asn Asp Phe Lys Leu 145 150 155 160

Lys Cys Glu Pro Lys Glu Gly Ser Leu Pro Leu Leu Tyr Glu Trp Gln 165 170 175

Lys Leu Ser Asn Ser Gln Lys Leu Pro Thr Leu Trp Leu Ala Glu Met 180 185 190

Thr Ser Pro Val Ile Ser Val Lys Asn Ala Ser Thr Glu Tyr Ser Gly
195 200 205

Thr Tyr Ser Cys Thr Val Lys Asn Arg Val Gly Ser Asp Gln Cys Leu 210 215 220

Leu Arg Leu Asp Val Val Pro Pro Ser Asn Arg Ala Gly Thr Ile Ala 225 230 235 240

Gly Ala Val Ile Gly Val Leu Leu Ala Leu Val Leu Ile Gly Leu Ile 245 250 255

Val Phe Cys Cys His Lys Lys Arg Arg Glu Glu Lys Tyr Glu Lys Glu 260 265 270

Val His His Asp Ile Arg Glu Asp Val Pro Pro Pro Lys Ser Arg Thr 275 280 285

Ser Thr Ala Arg Ser Tyr Leu Gly Ser Asn His Ser Ser Leu Gly Ser 290 295 300

Met Ser Pro Ser Asn Met Glu Gly Tyr Ser Lys Thr Gln Tyr Asn Gln 305 310 315 320

Val Pro Ser Glu Asp Phe Glu Arg Ala Pro Gln Ser Pro Thr Leu Pro 325 330 335

Leu Ala Lys Val Ala Ala Pro Asn Leu Ser Arg Met Gly Ala Val Pro 340 345 350

Val Met Ile Pro Ala Gln Ser Lys Asp Gly Ser Ile Val 355 360 365